

The American Reinvestment and Recovery Act

Clean Water and Drinking Water
State Revolving Fund Programs
Target 20% to “Green Reserve”

What are the State Revolving Funds (SRFs)?

- 2 Separate Environmental Infrastructure Funds
 - Clean Water State Revolving Fund
 - Drinking Water State Revolving Fund
- Provide ongoing financial assistance for water quality and drinking water projects
 - Loans in 2008
 - \$5.8 billion Clean Water SRF
 - \$2 billion Drinking Water SRF
- All States and Puerto Rico operate both SRFs
 - State Run Program
 - Select project
 - Financial terms
 - Project oversight
 - EPA Oversight

How are the SRFs Structured?

- EPA provides capitalization grants to States and Puerto Rico
 - Seed money for Environmental Infrastructure “banks”
- States make low interest loans to
 - Clean Water
 - Publicly owned wastewater and stormwater infrastructure
 - Public and Privately owned nonpoint source and estuary protection projects
 - Drinking Water
 - Drinking water utilities for treatment and distribution infrastructure
 - Principal forgiveness, negative interest rates and /or extended repayments terms to State defined “disadvantaged communities”
- Drinking Water SRF also includes State Set asides to support program development and implementation
 - Capacity Development
 - Technical Assistance
 - Public Water Supply Supervision (PWSS)
 - Source Water Protection

American Reinvestment and Recovery Act (ARRA)

- \$4 billion Clean Water SRF
- \$2 billion Drinking Water SRF
- 20% Green Reserve
- 50% additional subsidization
 - Principle forgiveness
 - Negative interest rate
 - Grants

American Reinvestment and Recovery Act (ARRA)

- Goals
 - Create/Save Jobs
 - Build Infrastructure
 - Make the most of the opportunity for Green Projects
- Preference for projects ready to start construction within 120 days
- All funds must be committed to projects under construction or having awarded contracts for construction by February 17, 2010

ARRA SRF Green Reserve

- Energy Efficiency
- Water Efficiency
- Green (stormwater) Infrastructure
- Innovated Environmental Projects

- 20% of each State's capitalization grant must be used for "Green Reserve" projects
 - For projects that are not clearly targeted by the Green Reserve, States must make a business case identifying substantial "green" benefits before they can be counted toward the 20% Green Reserve.
 - If states do not have sufficient applications when applying to EPA for their grant, they must make a timely and concerted solicitation for applications
 - No sooner than 180 days (August 17, 2009) can states certify insufficient applications and use funding for traditional projects

Clean Water SRF

20% Green Reserve

- Public/Private ownership varies by type of project
- Planning, Design and Building
- “Green” can comprise the complete project or a portion of a project.
- “Green” does not have to be part of a larger capital improvement project

Clean Water SRF

20% Green Reserve

- **Energy Efficiency** – the use of improved technologies and practices to reduce the energy consumption of water quality projects
 - Wastewater utility energy audit
 - Retrofits and upgrades to pumps and treatment processes
 - Leak detection equipment for treatment works
 - Producing clean power for publicly owned wastewater treatment works
 - wind, solar, hydroelectric, geothermal, biogas powered combined heat and power systems

Clean Water SRF

20% Green Reserve

- **Water Efficiency** – the use of improved technologies and practices to deliver equal or better services with less water.
 - Water Meters
 - Fixture Retrofit
 - Landscape/Irrigation
 - Gray Water Recycling
 - Reclamation, recycling and reuse of rainwater, condensate, degraded water, stormwater and or wastewater streams
 - Collection system leak detection equipment

Clean Water SRF

20% Green Reserve

- **Green Infrastructure** - Practices that manage and treat stormwater and that maintain and restore natural hydrology by infiltrating, evapotranspiring and capturing and using stormwater.
 - Green streets
 - Water harvesting and reuse
 - Porous pavement, bioretention, trees, green roofs, water gardens, constructed wetlands
 - Hydromodification for riparian buffers, floodplains, wetlands
 - Downspout disconnection to remove stormwater from combined sewers and storm sewers

Clean Water SRF

20% Green Reserve

- **Environmentally Innovative Projects** - Demonstrate new/innovative approaches to managing water resources in a more sustainable way, including projects that achieve pollution prevention or pollutant removal with reduced costs and projects that foster adaptation of water protection programs and practices to climate change
 - Wetland restoration
 - Decentralized wastewater treatment solutions
 - Water reuse
 - Green stormwater infrastructure
 - Water balance approaches
 - Adaptation to climate change
 - Integrated water resource management

Clean Water SRF Energy Examples

- **Steam Power Production/Water Reuse Project**
 - Santa Rosa, California received a \$136 million CWSRF low interest loan
 - Clean power production through the Geysers Recharge Project.
 - Pumping 11 million gallon per day (MGD) of highly treated wastewater from the Laguna Treatment Plant to The Geysers steamfields
 - The effluent is then pumped into the groundwater table where it generates steam.
 - The steam produces enough electricity for 85,000 households in Sonoma and other North Bay counties.
 - Recognized worldwide for being a weather-independent component of the water reuse system.

Clean Water SRF Energy Examples

- **Solar Energy Powers Wastewater Treatment Works**
 - Atlantic County Utility Authority of New Jersey received a \$2.1 million CWSRF low interest loan
 - Install solar panels
 - 500kW photovoltaic generation system includes solar arrays, inverters, wiring, metering controls, and appurtenances.
 - The captured solar power is specifically used for pumping systems at the plant.
 - Supply 3% of the POTWs total energy needs.
 - Stabilized user rates and is expected to contribute annual cost saving of at least \$115,000.
 - CWSRF loan repayment from household user charges.

Clean Water SRF Energy Examples

- **Biogas Energy Production at Wastewater Treatment Works**
 - West Lafayette, Indiana received a low interest CWSRF loan
 - Established a Cogeneration Facility at its wastewater treatment plant and a Fats, Oil and Grease Program.
 - Wastewater biosolids, along with additional fats, oil and grease, produces methane gas
 - Methane is used to generate electricity to power the POTW

Clean Water SRF Energy Examples

- **Energy efficient wastewater pumping project**
 - Inland Empire Utilities Agency in Ontario, California received a low interest loan to reconfigure the pumping system.
 - Retrofitted most pumps with high efficiency motors and removed eddy current clutches from many pumps.
 - Upgrades increased pump efficiency and improved equipment life
 - Upgrades resulted in annual energy and maintenance savings of \$71,000 or 457,000kWh -- a 10% energy reduction.

Drinking Water SRF

Repair and Replacement Projects often have green benefits,
BUT

ARRA requires more than typical “incidental” green benefits

- In most cases, infrastructure repair and replacement funded by the DWSRF generally does have a water and/or energy efficiency element to it.
 - Replacing/relining a water main creates a smooth surface, reduces friction, maintains pressure, and reduces the energy required to move water through that section of pipe.
 - Replacing/relining a water main eliminates leaks and can save substantial amounts of water

What is a DWSRF “Green Project” Under ARRA?

- To count as “green,” a clear, documented business case for the project investment must be made
 - includes clear, identifiable and substantial benefits
 - requires the presence and some basic analysis of substantive components
 - a simple, quantitative “bright line” not sufficient to determine that a business case has been made

What is a DWSRF “Green Project” Under ARRA?

- Components required for a “business case”
 - Technical: info from e.g., maintenance or operations records, engineering studies, planning documents
 - re problems (including any data on water and/or energy inefficiencies) in existing facility
 - that clarify the technical benefits from project in water and/or energy efficiency terms
 - Financial:
 - Some estimate of cost and water savings from project based on technical analysis of benefits
 - Assessment within total project cost that these savings comprise a substantial part of financial justification for project

What is a DWSRF “Green Project” Under ARRA?

- State DWSRF programs are responsible for making this decision in complying with 20% requirement
 - Must determine that projects properly qualify before counting project or portion towards the 20%
 - Must maintain “business case” documentation (where required) in State files and provide to EPA as needed
- EPA is required to oversee State compliance
 - Must ensure that State calculations of project qualification (to count towards the 20% “green”) were proper
 - Must ensure that business case documentation supports project qualification as “green”

Drinking Water SRF Energy/ Water Efficiency & Green Infrastructure/ Environmentally Innovative Projects

- Subject to documentation appropriate to ARRA
- Examples
 - On site renewable energy
 - Water Meters, Meter Reading Equipment
 - On-site improvement to facilities
- Eligible cost may include
 - Planning and Design
 - Building
 - Energy Audit/Water Conservation Plan

For More Information

- www.epa.gov/recovery/
- www.epa.gov/safewater/dwsrf/
- www.epa.gov/owm/cwfinance/cwsrf/index.htm
- www.epa.gov/waterinfrastructure/bettermanagement_energy.html
- www.epa.gov/watersense/tips/util.htm
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